

## l3\_rmod\_4

(TMU3rFg33w4MASLXZdnMDjQP85Qyt2w5CJw)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_group\_1 : \iota \Rightarrow o$  be given. Let  $v4\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v5\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v4\_vectsp\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_vectsp\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_vectsp\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\
 & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v3\_group\_1 X0) \wedge ( \\
 & (v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0))))))) \Rightarrow \\
 & (\forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v2\_rlvect\_1 \\
 & X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge ((v4\_vectsp\_2 X1 X0) \wedge \\
 & (l1\_vectsp\_2 X1 X0))))))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 \\
 & X0)) \Rightarrow (\forall X3. (m2\_finseq\_1 X3 (u1\_struct\_0 X1)) \Rightarrow (\forall X4. \\
 & (m2\_finseq\_1 X4 (u1\_struct\_0 X1)) \Rightarrow (((k3\_finseq\_1 X3 = k3\_finseq\_1 \\
 & X4) \wedge (\forall X5. (v7\_ordinal1 X5) \Rightarrow (\forall X6. (m1\_subset\_1 X6 \\
 & (u1\_struct\_0 X1)) \Rightarrow (((X5 \in k9\_xtuple\_0 X3) \wedge (X6 = k1\_funct\_1 X4 X5)) \Rightarrow \\
 & (k1\_funct\_1 X3 X5 = k5\_vectsp\_2 X0 X1 X2 X6)))))) \Rightarrow (k4\_rlvect\_1 X1 \\
 & X3 = k5\_vectsp\_2 X0 X1 X2 (k4\_rlvect\_1 X1 X4))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Rightarrow((v1\_funct\_1 X1)\wedge((v1\_finseq\_1 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))))) \quad (2)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow(m2\_subset\_1 (k3\_finseq\_1 X0) k1\_numbers k5\_numbers) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge((v5\_relat\_1 X1 X0)\wedge(v1\_funct\_1 X1)))\Rightarrow(\forall X2.(X2 \in k9\_xtuple\_0 X1)\Rightarrow(k7\_partfun1 X0 X1 X2 = k1\_funct\_1 X1 X2)) \quad (4)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow(\forall X1.(m2\_subset\_1 X1 k1\_numbers k5\_numbers)\Rightarrow((X1 = k3\_finseq\_1 X0)\Leftrightarrow(k2\_finseq\_1 X1 = k9\_xtuple\_0 X0))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (7)$$

### Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0)\wedge((v13\_algstr\_0 X0)\wedge((v2\_rlvect\_1 X0)\wedge((v3\_rlvect\_1 X0)\wedge((v4\_rlvect\_1 X0)\wedge((v3\_group\_1 X0)\wedge(v4\_vectsp\_1 X0)\wedge(v5\_vectsp\_1 X0)\wedge(l6\_algstr\_0 X0))))))))\Rightarrow \\ & (\forall X1.((\neg v2\_struct\_0 X1)\wedge((v13\_algstr\_0 X1)\wedge((v2\_rlvect\_1 X1)\wedge((v3\_rlvect\_1 X1)\wedge((v4\_rlvect\_1 X1)\wedge((v4\_vectsp\_2 X1 X0)\wedge(l1\_vectsp\_2 X1 X0))))))))\Rightarrow(\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0))\Rightarrow(\forall X3.(m2\_finseq\_1 X3 (u1\_struct\_0 X1))\Rightarrow(\forall X4. \\ & (m2\_finseq\_1 X4 (u1\_struct\_0 X1))\Rightarrow(((k3\_finseq\_1 X3 = k3\_finseq\_1 X4)\wedge(\forall X5.(v7\_ordinal1 X5)\Rightarrow((X5 \in k9\_xtuple\_0 X3)\Rightarrow(k1\_funct\_1 X4 X5 = k5\_vectsp\_2 X0 X1 X2 (k7\_partfun1 (u1\_struct\_0 X1) X3 X5))))))\Rightarrow \\ & (k4\_rlvect\_1 X1 X4 = k5\_vectsp\_2 X0 X1 X2 (k4\_rlvect\_1 X1 X3)))))) \end{aligned}$$